

# **Iowa Watershed Approach (IWA) Stakeholder Meeting**

**May 9, 2016**

**9:45-11:15 a.m.**

**Urbandale Public Library**

**3520 86<sup>th</sup> St.**

9:45 Peggy Russell: Iowa Economic Development Authority  
Welcome and introductions

9:55 Larry Weber: IIHR  
HUD Overview, General Overview of the Iowa Watershed Approach and role of the  
Regents partners in project implementation;  
IWA Formation  
Hydrologic Assessment  
Hydrologic Plan  
Design  
Construction  
Monitoring, Modeling, and Evaluation  
Resilience Planning

10:20 Allen Bonini: IDNR  
Technical Assistance

10:35 Jake Hansen: IDALS  
Technical Assistance

10:50 Teri Goodman: City of Dubuque Assistant City Manager  
Dubuque Projects

11:05 Questions for the Project Management Team

# State of Iowa

## National Disaster Resilience Award

▶ **\$96,887,177**

- ▶ Anticipated Start Date of Grant – July 1<sup>st</sup>
  - HUD to issue a NOFA – 30 day public comment period
  - Grantee submits required policies & certifications
  - HUD Secretary signs Grant Agreement with IEDA

# Iowa Economic Development Authority

## HUD-NDR Grantee

### PARTNERS

- U of I: Iowa Flood Center, Center for Evaluation and Assessment
- ISU: Extension, Nutrient Research Center, Iowa Water Center
- UNI: Tallgrass Prairie Center
- Iowa Department of Natural Resources
- Iowa Department of Agriculture and Land Stewardship
- Homeland Security and Emergency Management Department
- 8 Counties: Iowa, Johnson, Howard, Benton, Mills, Winneshiek, Buena Vista, Fremont
- 3 Cities: Dubuque, Storm Lake, Coralville

# The Iowa Watershed Approach



Larry J Weber

([larry-weber@uiowa.edu](mailto:larry-weber@uiowa.edu))

Director, IIHR—Hydroscience & Engineering



# National Disaster Resilience Competition



- Funder: US Dept. of Housing and Urban Development (HUD), in collaboration with the Rockefeller Foundation
- Funding Level: \$1 billion; Community Development Block Grant; Superstorm Sandy (special appropriation of \$180M)
- Applicant: State of Iowa, Iowa Economic Development Authority
- *Iowa Watershed Approach* program development by Iowa Flood Center in consultation with many, many partners

# HUD's Program Goals



- Help communities recover from prior disasters and improve their ability to withstand and recover more quickly from future disasters, hazards, and shocks
- Consider future risks and vulnerabilities in planning and decision-making
- Help communities better understand their risks and identify ways in which they can protect the long-term well-being and safety of residents

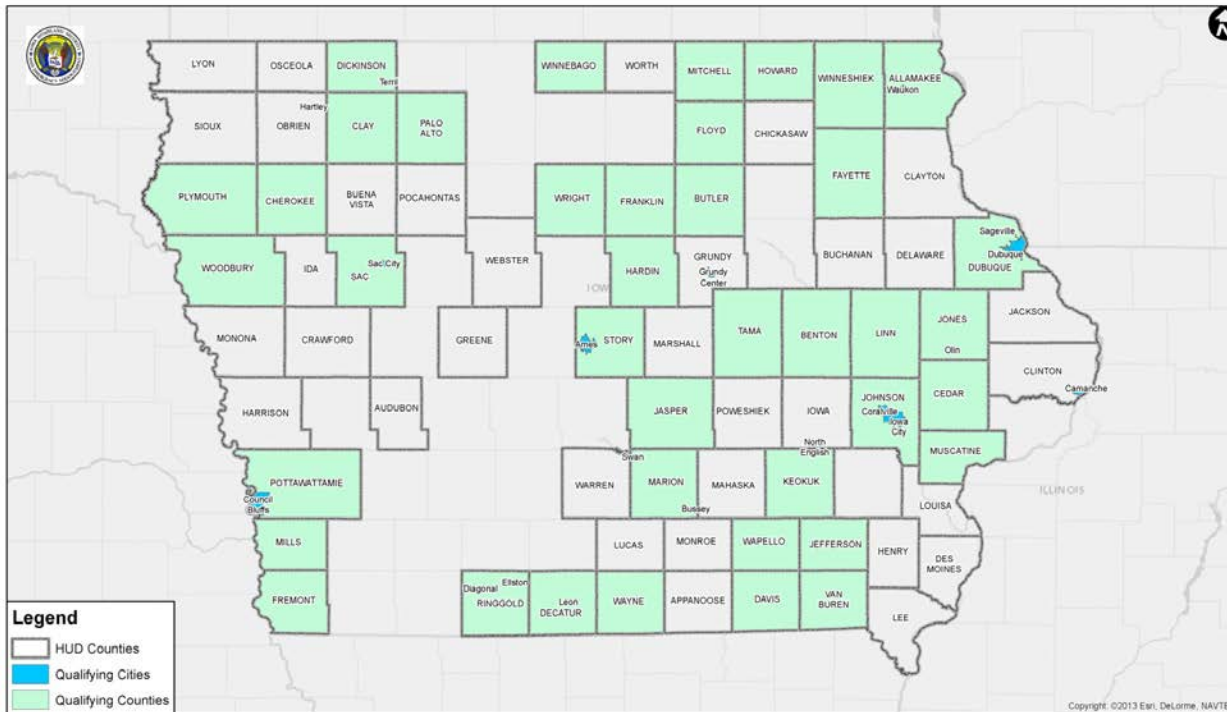
# HUD's Program Justification



- Cities and towns face significant economic and social risks from extreme weather events
- These risks are expected to increase substantially due to climate and environmental factors beyond the control of the vulnerable populations
- We can not effectively reduce our risks and vulnerabilities without considering future extreme events in planning and decision-making

# NDRC Qualifications

Qualifying Areas Submitted to HUD



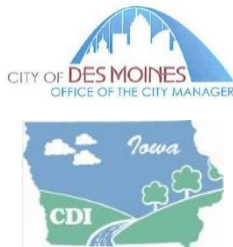
- Presidential Declared Major Disaster in 2011, 2012, or 2013
- Benefit to low to moderate income (LMI) areas
- Environmental and/or infrastructure most impacted and distressed and unmet recovery needs areas (MID-URN)



# Iowa Grant Award: \$96,887,177



# Iowa Watershed Approach



# Iowa Watershed Approach (IWA): Program Goals



- Reduce flood risk
- Improve water quality
- Increase resilience
- Engage stakeholders through collaboration and outreach/education
- Improve quality of life and health, especially for vulnerable populations
- Develop a program that is replicable throughout the Midwest and the United States



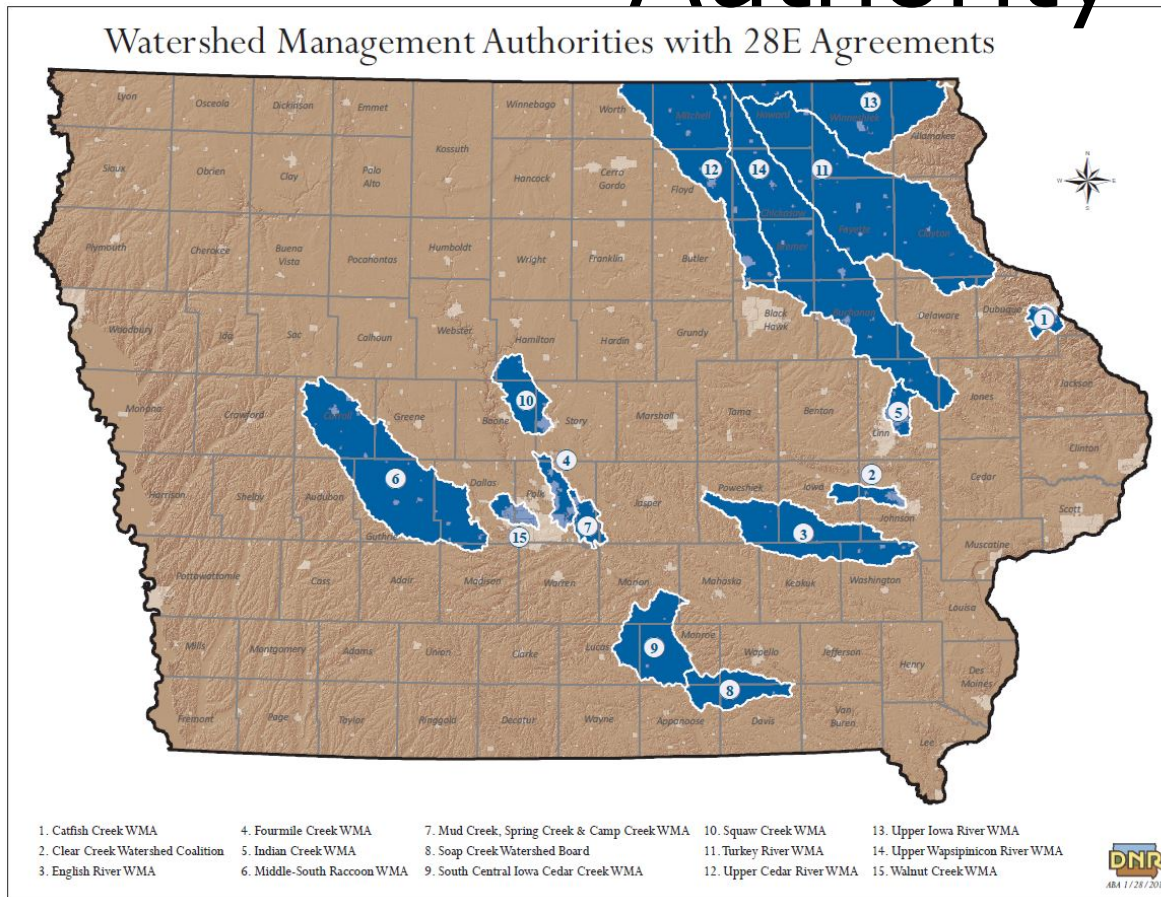
# IWA Project Description



- Establish a Watershed Management Authority
- Develop a hydrologic assessment and watershed plan
- Deploy monitoring equipment
- Implement projects in the watershed to reduce the magnitude of downstream flooding and improve water quality
- Assess the project benefits based on monitoring and modeling data



# Watershed Management Authority

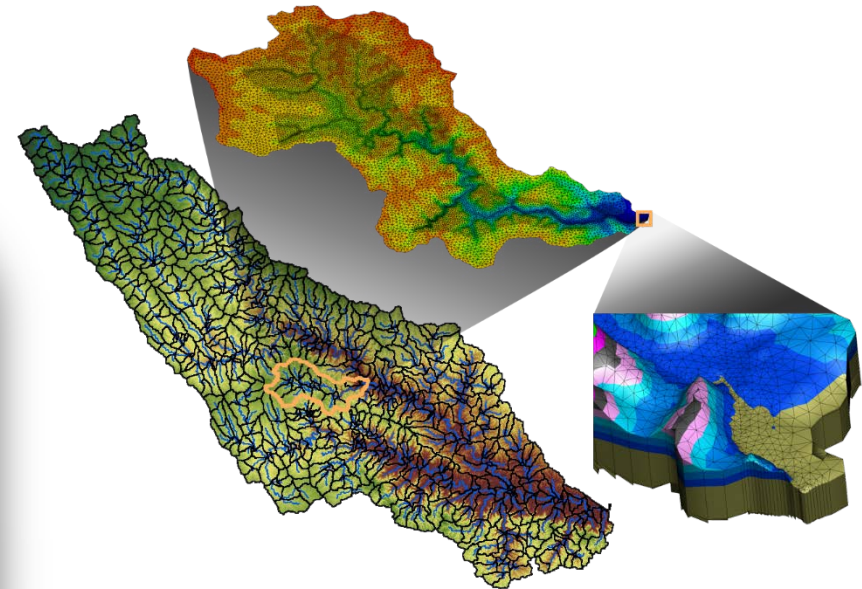
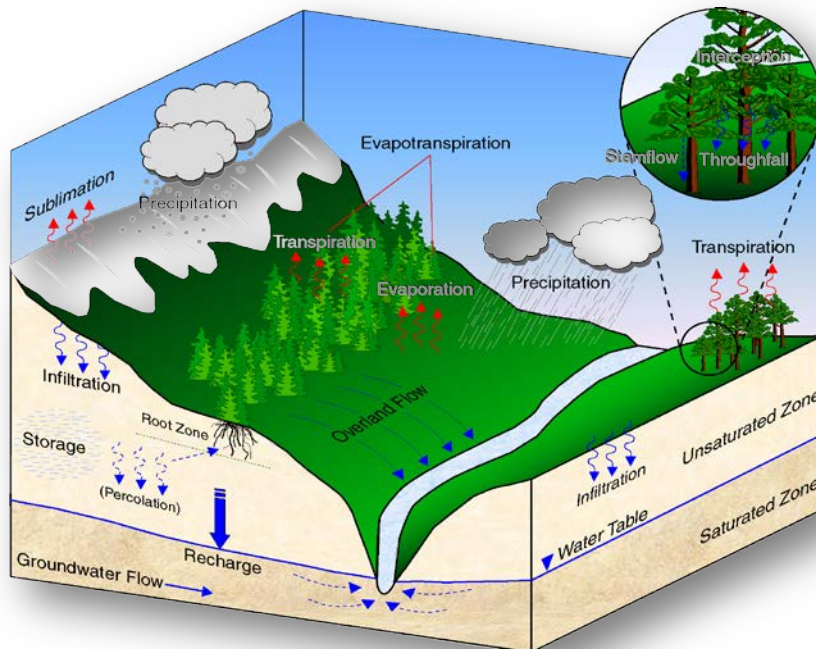


## Benefits of forming a WMA:

- Foster multi-jurisdictional partnership and cooperation
- Develop a watershed plan
- Leveraging resources such as funding, technical expertise
- Facilitate stakeholder involvement in watershed management

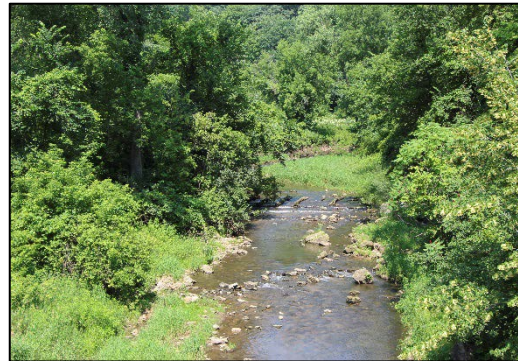
# Hydrologic Assessment & Modeling

- Understand flood hydrology in the watershed
- Estimate watershed response to different rainfall events
- Quantify the impact of small-scale flood mitigation practices





# Project Construction & Implementation



- Engage volunteer landowners to construct projects in subwatersheds
- Practices may include:

**Floodplain restoration or easements, farm ponds, terraces, buffer strips, bioreactors, wetlands, saturated buffers, storm water detention basins, sediment detention basins**

- 75% cost share assistance available to landowners; 25% local (landowner) contribution
- Practices will follow NRCS guidelines and specifications
- Monitor impact of constructed projects and evaluate feasibility at a larger scale

*Engagement of WMA's, watershed partners, and private landowners will be vital to project success*

# Data Collection & Monitoring



# Resilience Program

- *Ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events*
- “Build back stronger”
- “Build back differently”





# IWA Flood Resilience Team

The IWA Flood Resilience Team will engage stakeholders in nine watersheds for 3 to 5 years

## YEAR 1

Clear Creek  
Upper Iowa  
English River

## YEAR 2

Clear Creek  
Upper Iowa  
English River

Middle Cedar  
Upper Wapsi  
Dubuque

## YEAR 3

Clear Creek  
Upper Iowa  
English River

Middle Cedar  
Upper Wapsi  
Dubuque

North Raccoon  
East Nish  
West Nish

## YEAR 4

Ongoing  
Assessment

Middle Cedar  
Upper Wapsi  
Dubuque

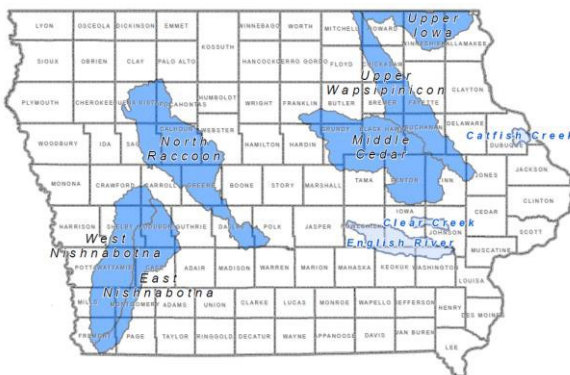
North Raccoon  
East Nish  
West Nish

## YEAR 5

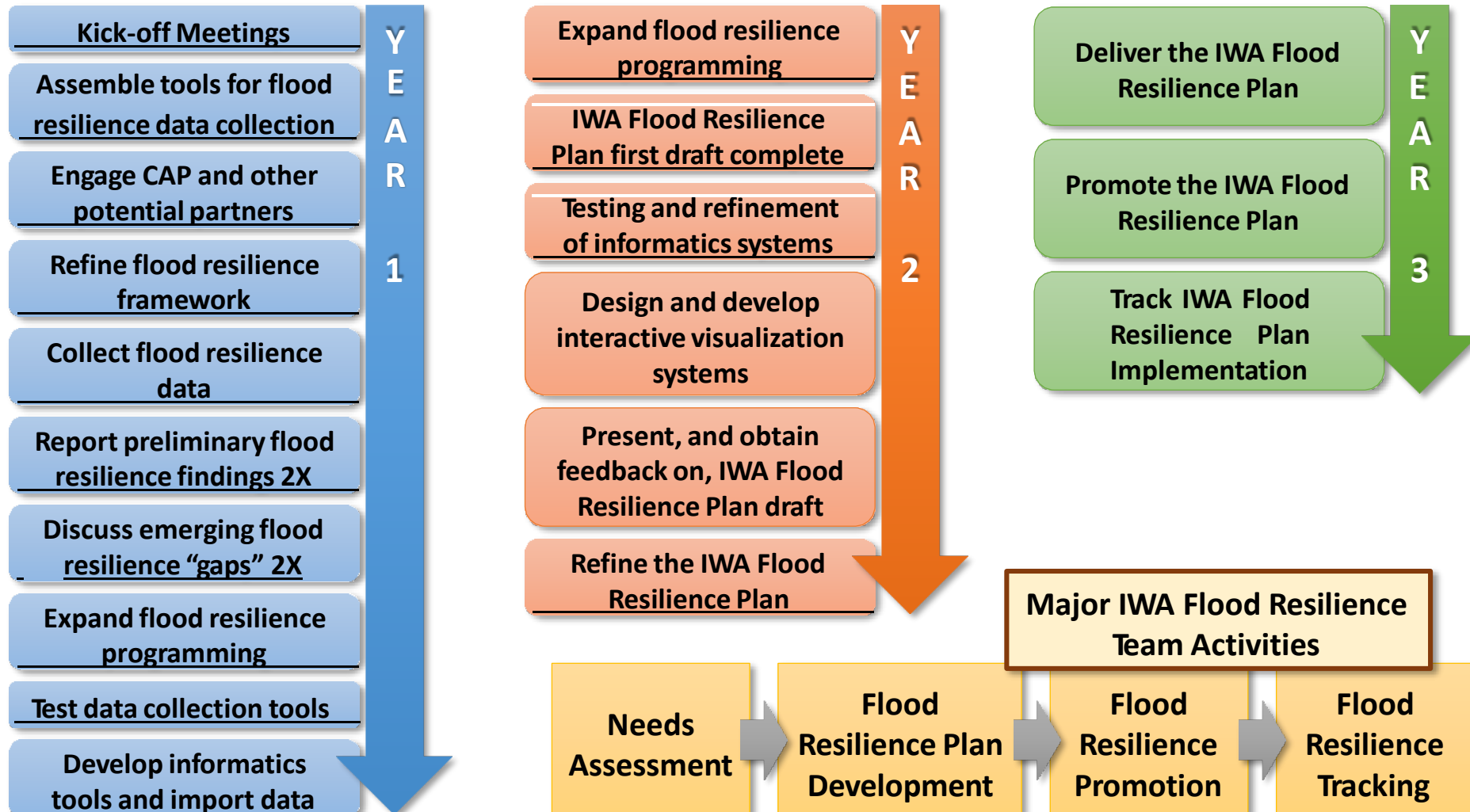
Ongoing  
Assessment

Ongoing  
Assessment

North Raccoon  
East Nish  
West Nish



# IWA Flood Resilience Team Activities



# ISU Extension & Outreach

- Develop theme-based curriculum, outreach materials, and social media packages
- Develop a communication plan in each project watershed
- With project partners, coordinate field days, workshops, and events
- Collaborate with INRC team to develop additional outreach materials

Contact: John Lawrence

Director, Iowa Nutrient Research Center

[jdlaw@iastate.edu](mailto:jdlaw@iastate.edu)



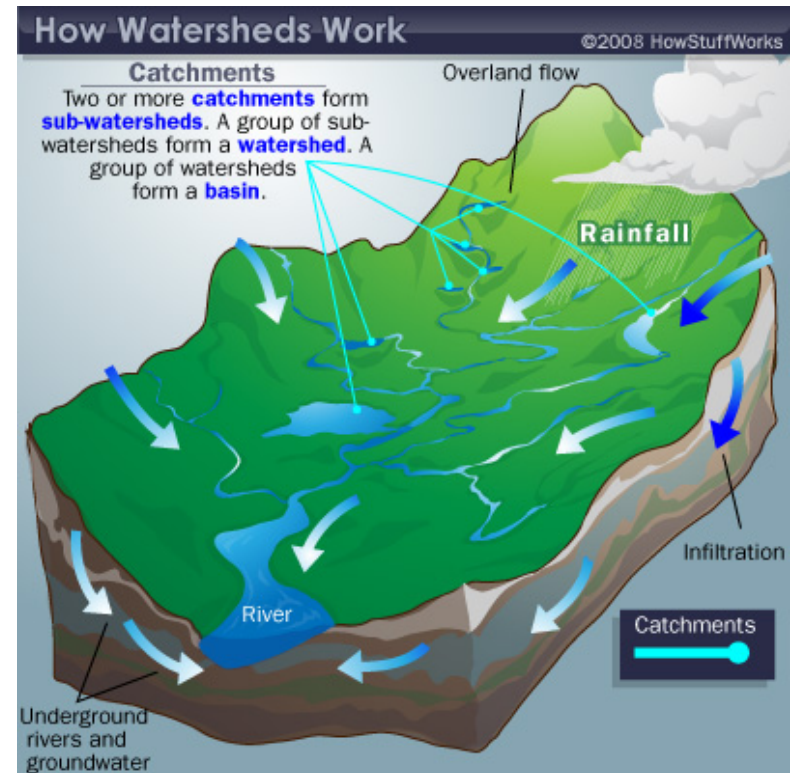
# Iowa Nutrient Research Center

- Develop a framework to monetize the benefits of nutrient-reducing practices
  - Considering both primary on- and off-site economic benefits, as well as, secondary and tertiary benefits
- Develop alternative scenarios of practices aimed at achieving the goals established in the Iowa Nutrient Reduction Strategy
  - Better understand effects from field to sub-watershed to larger watershed scales
- Incorporate changing hydrologic patterns into hydrologic models that predict water quantity and quality
  - Understand how hydrologic changes from weather and land management impact nutrient processing and E/ET



# Iowa Water Center

- Identify vulnerable watershed areas base on
  - Slope
  - Soil type
  - Proximity to water
- Identify appropriate practices to address runoff and erosion vulnerability
- Estimate soil erosion and runoff with and without practice implementation

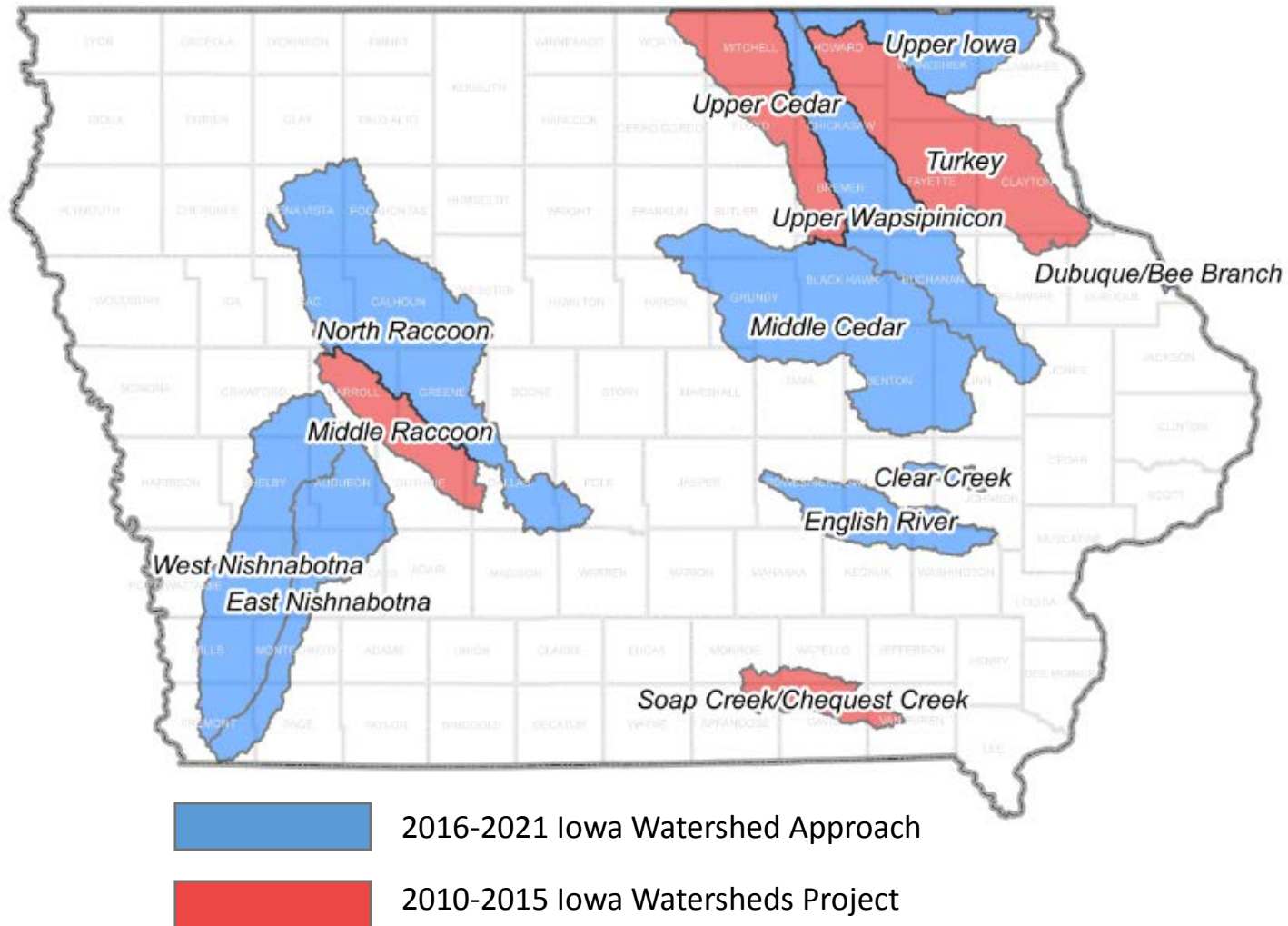


# Tallgrass Prairie Center



- Provide technical assistance to each WMA in native vegetation establishment and management, including individual consultation
- Coordinate with partners to organize field days, workshops, and create demonstration sites for teaching and learning
- Provide print and online technical guides and videos
- Build a leadership network in prairie reconstruction techniques related to agriculture

# Iowa Watersheds Project



# National Disaster Resilience Competition

ISU Planning (Extension, Water Center, Nutrient Center)	\$2,112,500
IaDNR Planning (WMA Formation & Assessment)	\$576,000
UI CEA Planning (Program Evaluation)	\$482,863
IIHR/IFC Planning (Phase 1 Hydrologic Assessment)	\$3,125,000
IIHR/IFC Planning (WMA Adv Board and Training)	\$812,500
UNI Planning (Tallgrass Prairie Center)	\$438,750
HSMD Planning (Data Support and Flood Mitigation Board)	\$1,776,852
HSMD Planning-PreAgreement CostsApplication	\$50,500
IFC Planning-PreAgreement CostsApplication	\$62,000
Dubuque Planning-PreAgreement CostsApplication	\$52,100
IDALS Planning (Coordination w/WQI)	\$250,000
UI IFC/CEA (+CAP) Resilience Planning	3,689,513
<b>Total Planning</b>	<b>\$13,428,578</b>

Infrastructure Projects	
Dubuque	\$31,527,665
Storm Lake	\$6,474,750
Coralville	\$1,834,800
<b>Total</b>	<b>\$39,837,215</b>

Watershed Related Projects		
Counties	Project Coordinators	\$2,250,000
SWCD/NRCS/Contract	Design	\$1,511,792
Counties	Practices	\$29,947,500
IIHR/IFC	Modeling, Data Analysis, Sensors	\$5,303,179
Total		\$39,012,471

admin \$4,608,913

**Grand Total \$96,887,177**

Draft Budget  
Subject to  
Change  
Pending  
Final HUD  
Agreement



# Project Timeline

HUD - NDRC: East Nishnabotna, West Nishnabotna, North Raccoon

2016 by Quarter				2017 by Quarter				2018 by Quarter				2019 by Quarter				2020 by Quarter				2021 by Quarter									
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4						
				WMA Formation																									
				Hydrologic Assessment																									
					Watershed Plan																								
							Select Implementation Sites																						
								Project Design																					
								Project Construction/Implementation																					
				Sensor Deployment																									
				Baseline Data Collection and Analysis																									
						Detailed Model Development and Scenerio Analysis																							
				Evaluation of Projects																									

HUD - NDRC: Clear Creek, English River, Middle Cedar, Upper Iowa, Upper Wapsipinicon

2016 by Quarter				2017 by Quarter				2018 by Quarter				2019 by Quarter				2020 by Quarter				2021 by Quarter						
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
				Hydrologic Assessment																						
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				Evaluation of Projects																						

# Stakeholder Contributions

- Fulfill leverage commitments
- Help coordinate events and promote IWA project engagement with landowners
- Participate in the IWA program
  - Attend WMA meetings, events, and participate in resiliency program
- Help promote this vision to other parts of the state
  - Help watersheds leverage IWA project to secure other funding for new projects



# Discussion

- 1.) How would you like to be engaged?
- 2.) What is important to you in the IWA project?





Iowa Flood Center  
The University of Iowa  
100 C. Maxwell Stanley Hydraulics Laboratory  
Iowa City, IA 52242  
319-384-1729 (office)

For more information, visit  
[www.iowafloodcenter.org](http://www.iowafloodcenter.org)

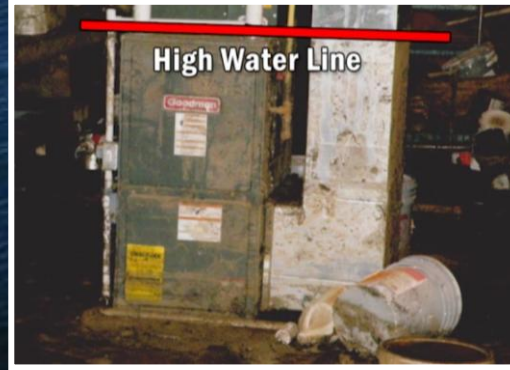


# Bee Branch Watershed

## FLOOD MITIGATION PROJECT



THE CITY OF  
**DUBUQUE**  
*Masterpiece on the Mississippi*



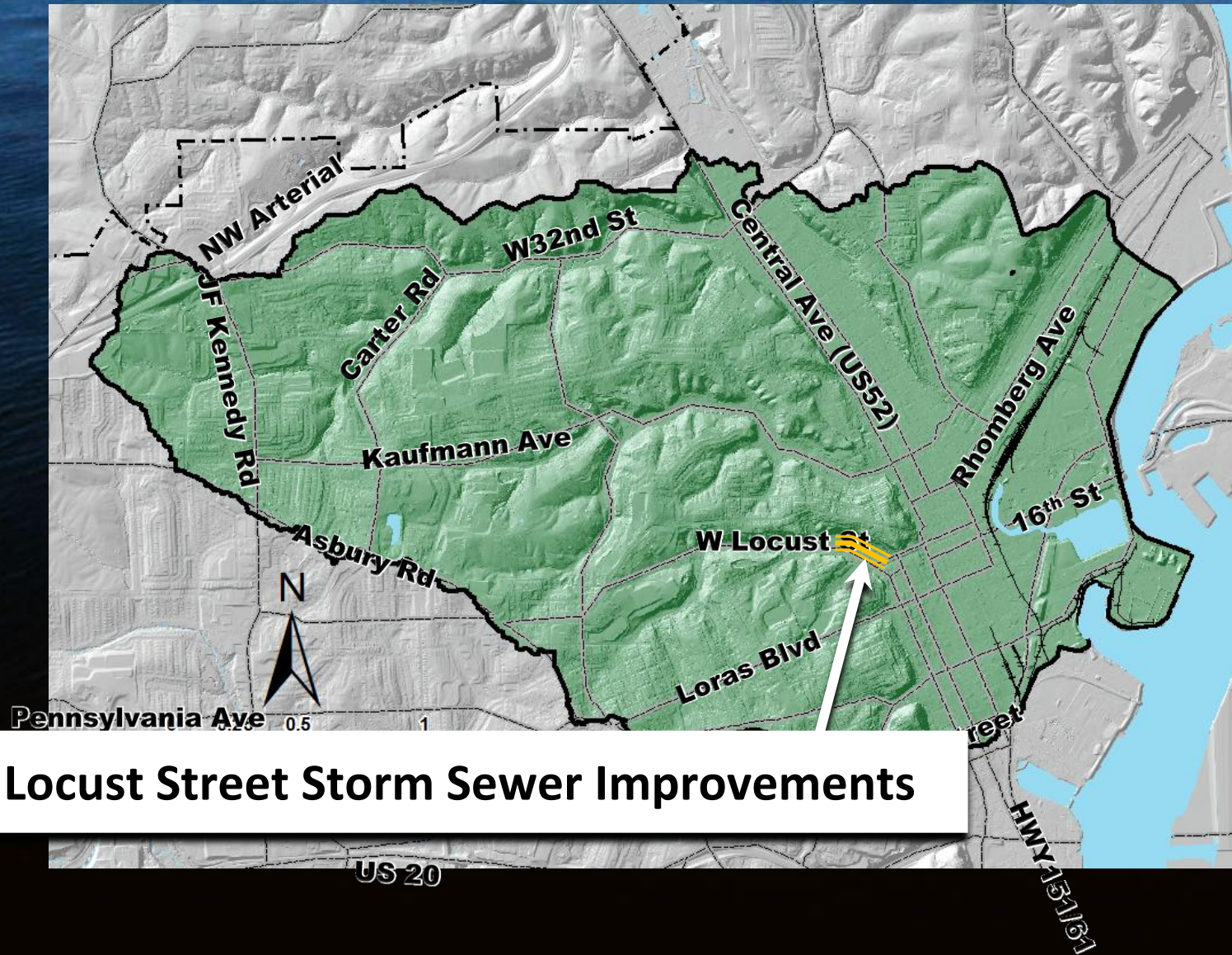
# NDRC - DUBUQUE



May 2, 2016



# W. Locust Storm Sewer Improvements

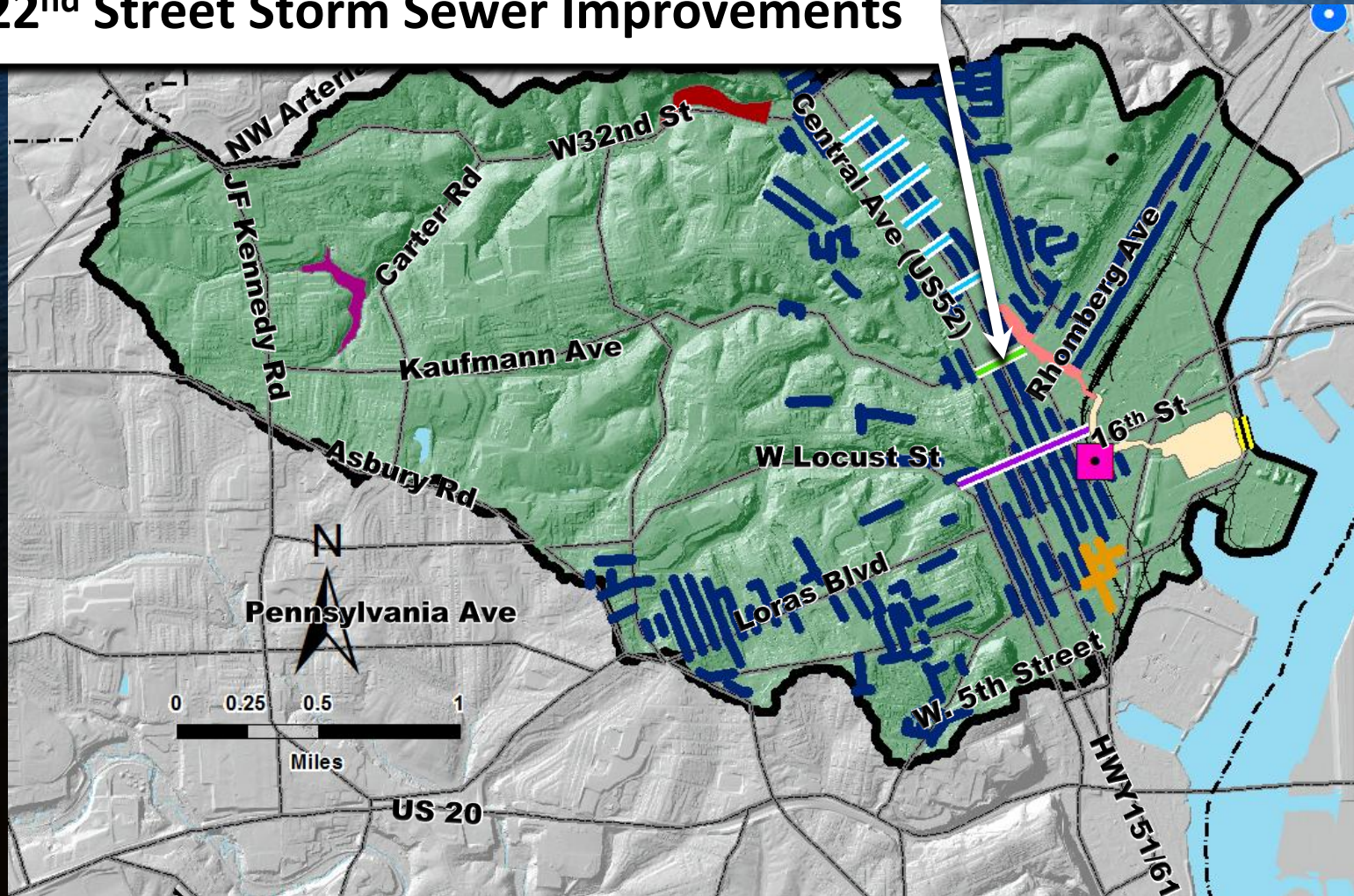


**W. Locust Street Storm Sewer Improvements**



# 22<sup>nd</sup> Street Storm Sewer Improvements

## 22<sup>nd</sup> Street Storm Sewer Improvements





# Upper Bee Branch Creek Restoration





# Upper Bee Branch Creek Restoration





# Upper Bee Branch Creek Restoration





# Upper Bee Branch Creek Restoration





# Upper Bee Branch Creek Restoration





# Upper Bee Branch Creek Restoration





# Upper Bee Branch Creek Restoration





# Upper Bee Branch Creek Restoration



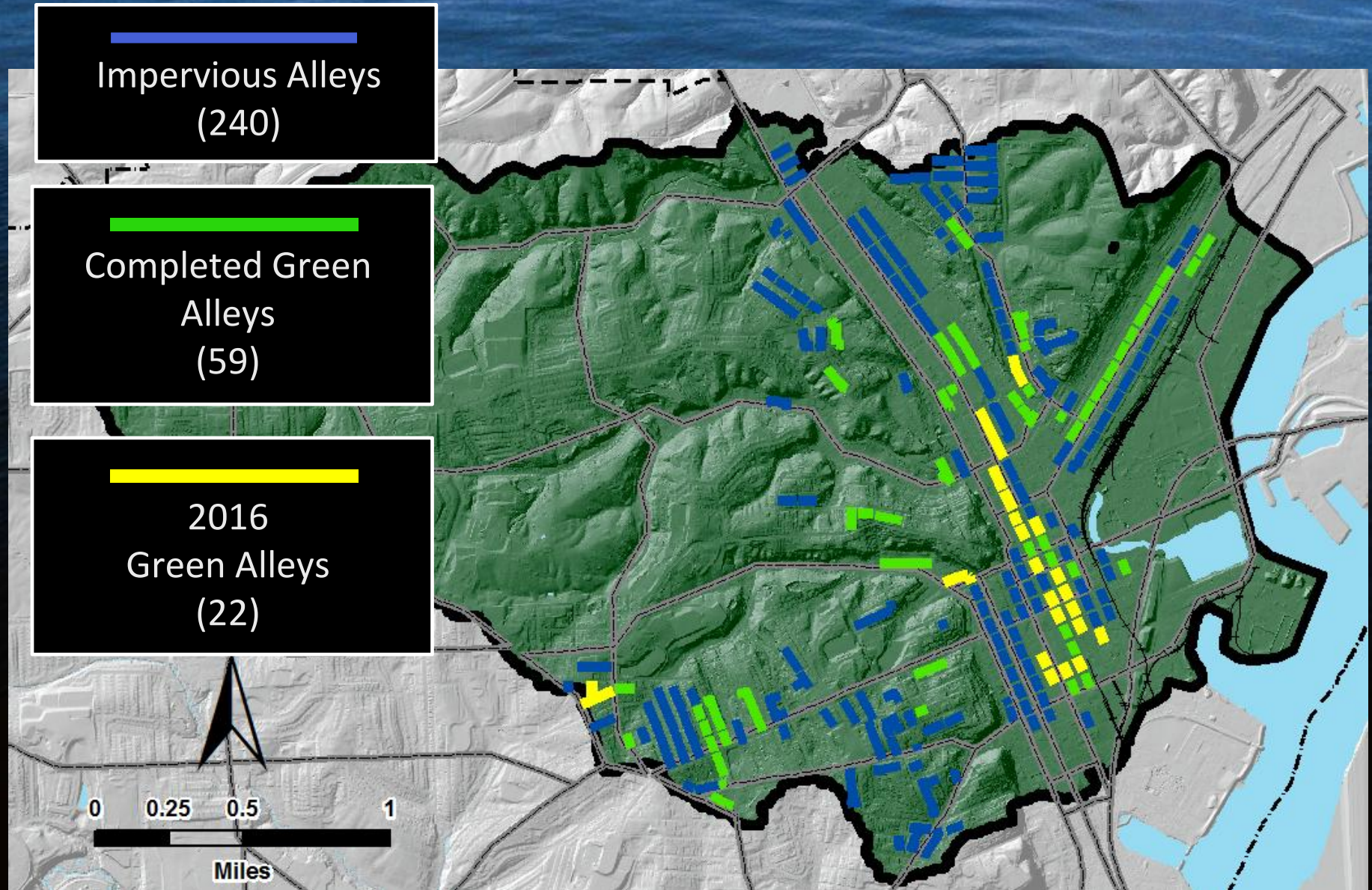


# Upper Bee Branch Creek Restoration





# Impervious Surface Reduction (Green Alleys)

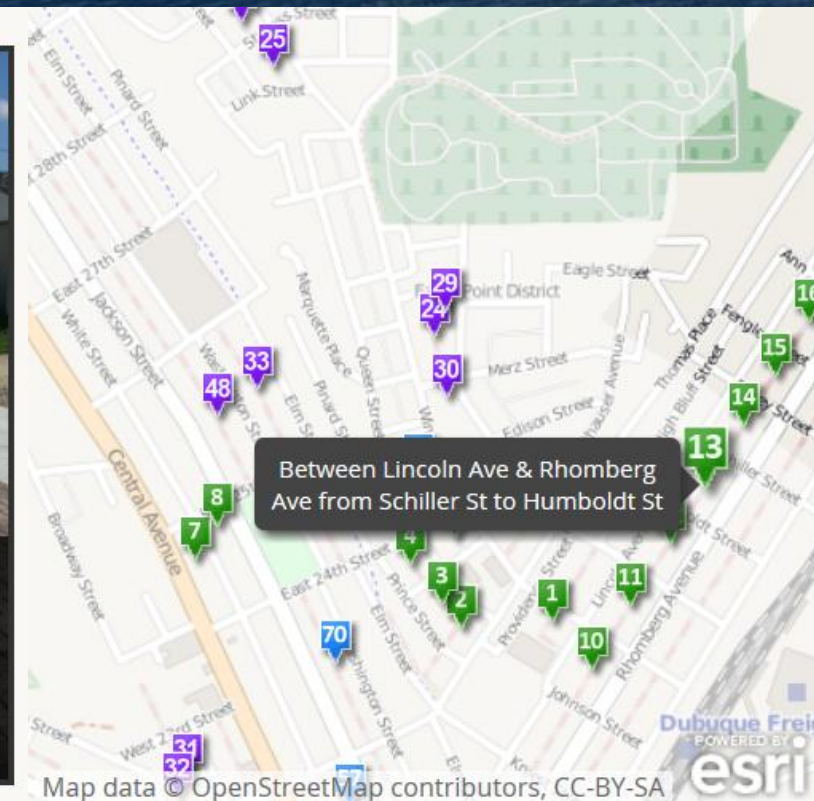
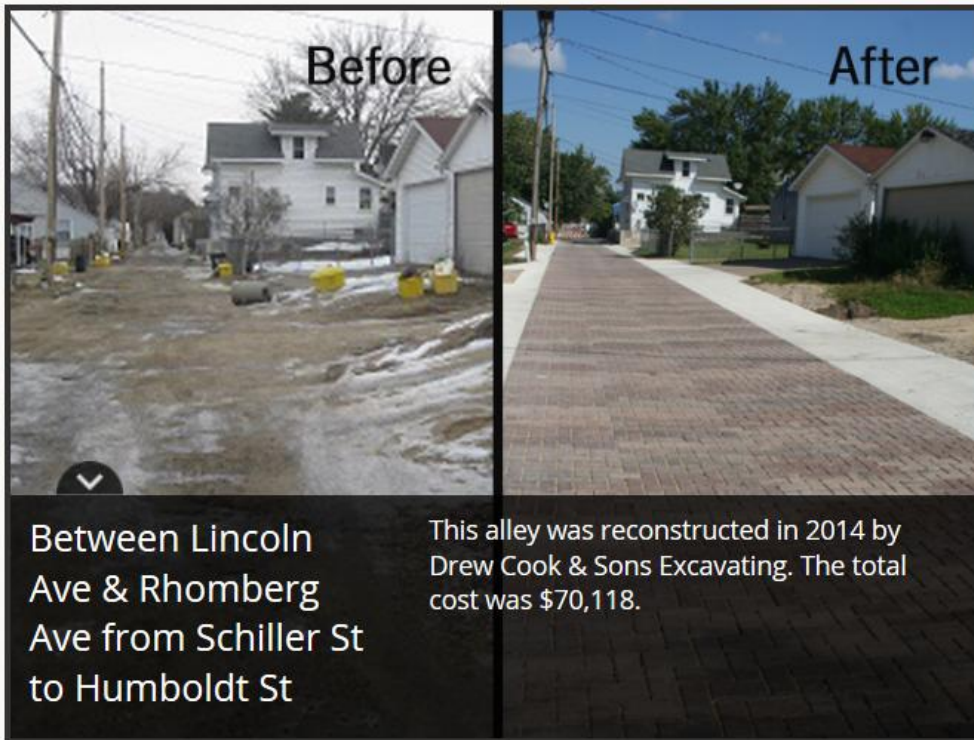




# Green Alley Interactive Story Map



[www.cityofdubuque.org/greenalleys](http://www.cityofdubuque.org/greenalleys)



**HUD Iowa Watersheds Project  
Iowa Department of Agriculture and Land Stewardship  
Scope of Work**

**Overview**

The Iowa Department of Agriculture and Land Stewardship (IDALS) has been tentatively allocated \$250,000 to assist in outreach and education activities associated with the HUD Iowa Watersheds project. Specifically, IDALS proposes to provide technical assistance to recipient counties and subrecipient Soil and Water Conservation Districts (SWCDs) and Watershed Management Authorities (WMAs) in selecting and training the six watershed project coordinators identified in the project.

Presently, IDALS provides funding to several SWCDs for watershed projects throughout Iowa, including funds for cost-sharing installation of structural conservation practices and salary and benefits for watershed project coordinators. IDALS also provides training and technical assistance to those coordinators as they navigate state and federal funding processes for a number of different public and private funding mechanisms.

IDALS will utilize HUD funding to provide training and technical support to IDALS and the project coordinators throughout the project. We project that we will utilize an Environmental Specialist on about a .5 FTE basis devoted to the HUD IWA. Specific services IDALS will provide to the HUD IWA through this agreement will include:

- Technical assistance to SWCD commissioners and/or County Supervisors on management of project coordinators dedicated to HUD Iowa Watersheds program
- Development of project coordinator job description (as necessary)
- Assistance to SWCDs and counties in resume review/interviews for potential project coordinator applicants (as requested)
- Development of financial management tools and contractor coordination guidance for project coordinators
- Development of standard documents (i.e. maintenance agreements) for use by project coordinators
- Direct technical assistance to project coordinators relating to engaging landowners and selling flood resilience practice sign-ups
- Individual and/or group training for coordinators on unique requirements associated with HUD program compared to other SWCD watershed implementation grants

The activities proposed by IDALS directly support the project MID-URN areas by providing training, tools, forms, and other technical assistance to the project coordinators and others who will be helping to manage the implementation of constructed projects and conservation projects benefiting the MID-URN areas.

**Budget**

The overall budget for this proposal is \$250,000, and the period of performance for IDALS will begin on July 1, 2016 and conclude on September 30, 2021.

# HUD National Disaster Resilience Competition Grant

**In January 2016, the U.S. Department of Housing & Urban Development awarded the City of Dubuque \$31.5 million in**

disaster resiliency funds for the Bee Branch Healthy Homes Resiliency Program and stormwater infrastructure improvements. The funds will help residents rebuild and increase their resiliency to future disasters.





# Bee Branch Healthy Homes Resiliency Program

## \$8.4 million

to assist Bee Branch Watershed residents or property owners in repairing and flood-proofing their homes

### Examples Include:

- Foundation repairs
- Water and sewage services
- Furnace Replacement
- Water heater replacement
- Basement windows
- Mold and mildew remediation
- Lead remediation
- Lateral connection repairs
- Sump pumps
- Downspouts





# The Iowa Watershed Approach Kickoff Meetings 2016

- **English River WMA/Kickoff Meeting**

Thursday, May 19, 6 PM

Williamsburg Public Library

- **North Raccoon River Kickoff Meeting**

Tuesday, May 31, 3 PM

Storm Lake Public Library

- **East Nishnabotna River Kickoff Meeting** Wednesday, June 1, 4 PM

United Faith Community Center, Sidney

- **West Nishnabotna River Kickoff Meeting**

Thursday, June 2, 9 AM

Glenwood Resource Center

- **Upper Iowa River WMA/Kickoff Meeting** Wednesday, June 8, 4 PM

Decorah City Council Chamber

- **Upper Wapsipinicon River WMA/Kickoff Meeting**

Tuesday, June 14, 1:30 PM

Buchanan County Courthouse

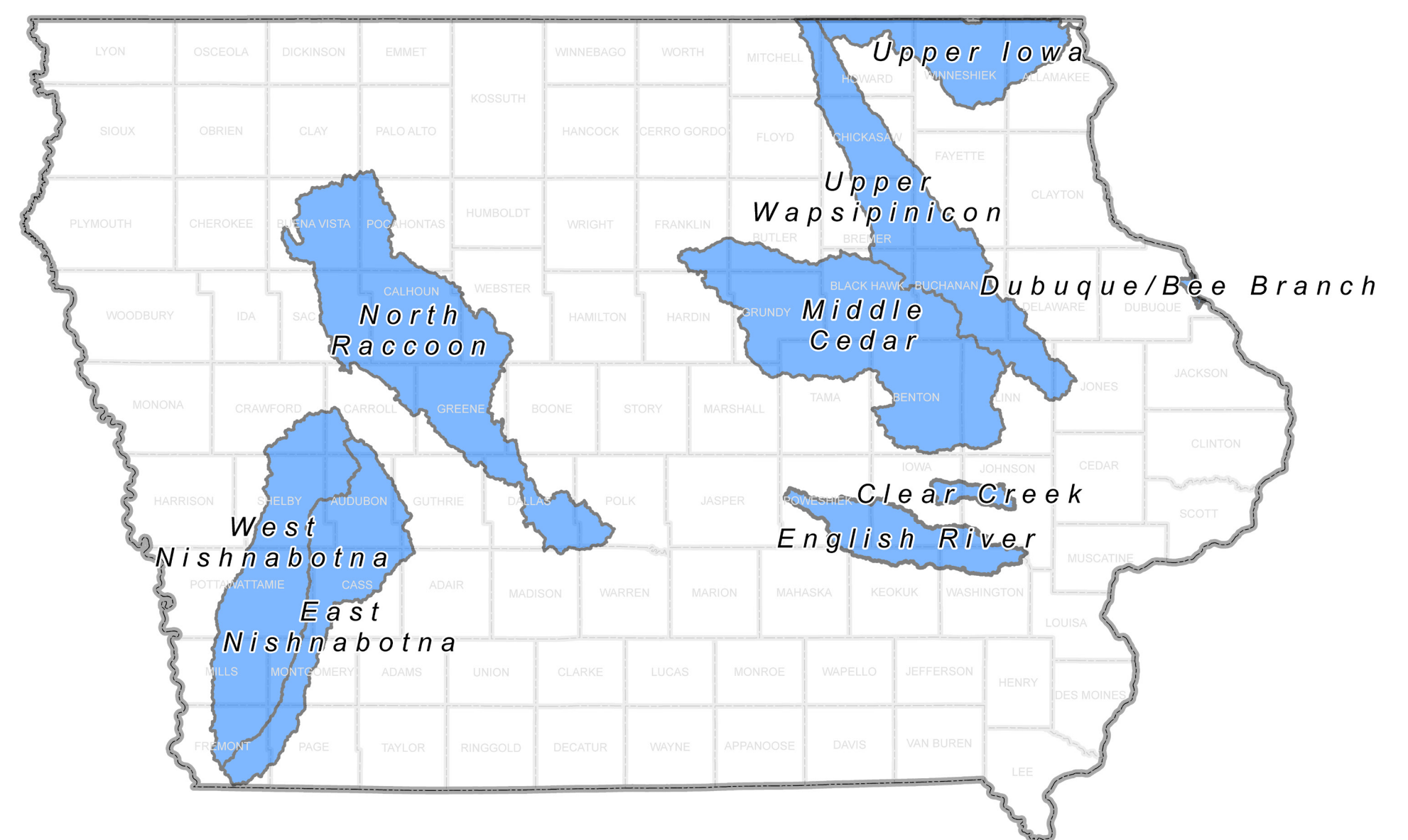
- **Clear Creek Watershed Board/Kickoff Meeting**

Wednesday, June 15, 5 PM

Coralville Public Library

- **Middle Cedar River WMA/Kickoff Meeting** Thursday, June 16, 3 PM

Farmers Savings Bank & Trust Community Room, Vinton



**Questions? Contact Breanna Shea at the Iowa Flood Center**  
**Phone: 319-384-1729   Email: [breanna-shea@uiowa.edu](mailto:breanna-shea@uiowa.edu)**